Population Change
Practice Problems

1. Given the following, find the rate of population change for a population of prairie dogs. Natality 14, mortality 55, immigration 7, and emigration 34. -68

2. Given the following, find the rate of population change for a population of geese. Natality 47, mortality 17, immigration 16, and emigration 1. +45

3. Given the following, find the rate of population change for a population of squirrels. Natality 18, mortality 10, immigration 14, and emigration 11. +11

4. Given the following, find the rate of population change for a population of perch. Natality 2500, mortality 2150, immigration 0, and emigration 0. +350

5. Given the following, find the rate of population change for a population of prairie chickens. Natality 147, mortality 159, immigration 55, and emigration 41. +2

6. In 1990 the population of rats in Regina was estimated at 3500. The rate of population change was calculated to be -164 rats per year. What was the population in 2005? 1040

7. The current population of guppies in Mr. Rogers aquarum is 34. The rate of population change was determined to be +17 guppies per year. Predict the population in 7 years. Do you think this prediction will come true? Why or why not? 153
NO SPACE AVAILABL

8. In 2001, the population of stray cats in Regina was estimated to be 440. The rate of population change was calculated at +22 cats per year. Predict the population in 2020? 858

9. The current population of dandelions in the LeBoldus school yard is 82. The rate of population change was found to be +14 dandelions per year. Predict the population in 12 years? 250

10. In 2000, the population of mule deer in the Lumsden valley was estimated at 348.the rates of change were ; Natality = 106, mortality= 69, immigration=28 and emigration =12. Predict the population in 2015. Why might this prediction not hold true? +53
1143 food supply / # of prey may increase / decrease

11. In 2003, the population of mice on I.P. Freely's farm was 380. After purchasing some cats, the rate of population change was calculated to be -30 mice per year. How long wil it take for Mr. Freely's farm to be mouse free? ~13 years 12.67 years
12 years 244 days 13 hours 12 minutes

12. Amanda Hugnkis has a rabbit problem in her pasture. Her current rabbit population is estimated at 140. Currnet rates of change are natality = 81, mortality = 35, immigration = 4 and emigration = 26. If these trends continue, how long will it take before the Hugnkis pasture population doubles? +24
5 years 302 days 5.83 years
22 hours
48 minutes